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(71) Applicant (for all designated States except US): **L'AIR LIQUIDE, SOCIETE ANONYME A DIRECTOIRE ET CONSEIL DE SURVEILLANCE POUR L'ETUDE ET L'EXPLOITATION DES PROCEDES GEORGES CLAUDE** [FR/FR]; 75, quai d'Orsay, F-75321 Paris Cedex 07 (FR).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **DUSSARRAT, Christian** [FR/JP]; Tsukubamatsushiro 4-2-1 #204, 4-15-2, Matsushiro, Tsukuba-shi (JP). **GIRARD, Jean-Marc** [FR/FR]; 12, rue Michel Chasles, F-75012

Paris (FR). **KIMURA, Takako** [JP/JP]; 586-2 Higashi Hiratsuka, Tsukuba-shi, Ibaraki 300-0812 (JP). **TAMAOKI, Naoki** [JP/JP]; 2-10-5-604 Ishikawa-machi, Oota-ku, Tokyo 145-0061 (JP). **SATO, Yuusuke** [JP/JP]; Ostuka 6-30-7, Bynkyo-ku, Tokyo 112-0012 (JP).

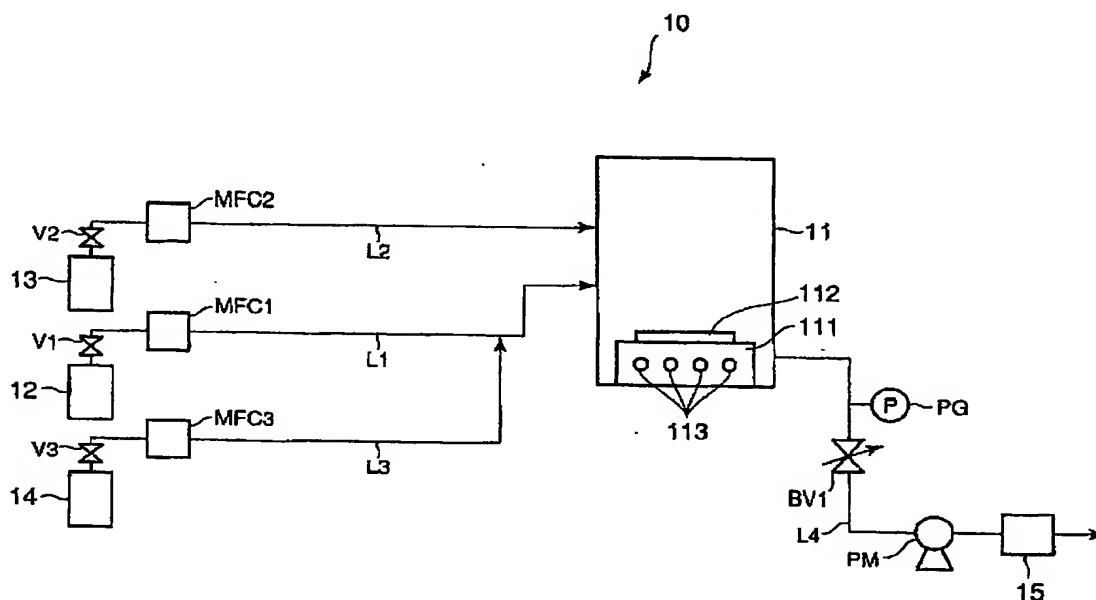
(74) Agents: **VESIN, Jacques et al.**; L'Air Liquide S.A., 75, quai d'Orsay, F-75321 Paris Cedex 07 (FR).

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(54) Title: METHODS FOR PRODUCING SILICON NITRIDE FILMS BY VAPOR-PHASE GROWTH



(57) Abstract: To provide a method that is not accompanied by the production of ammonium chloride, avoids significant admixture of carbonaceous contaminants in the film products, and can produce silicon nitride films with improved film properties even at relatively low temperatures. Silicon nitride films are formed on substrates by feeding a hydrazine gas and at least 1 precursor gas selected from the group consisting of trisilylamine gas and a silylhydrazine gas into a reaction chamber (11) that holds at least 1 substrate (112) and inducing the vapor-phase reaction of the two gases. Silylhydrazine gas can also produce silicon nitride films by itself by thermal decomposition.



GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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